

RECEIVED

MAR 10 2004

AMENDMENTS TO THE CLAIMS

OFFICE OF PETITIONS

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

Claim 1 (Currently Amended): A method comprising:

displaying on a display device ~~generating~~ a first gray element ~~having red, green and blue values that are substantially equivalent to a selected green value~~ based on an estimated gamma for a green channel of ~~the~~ a display device;

displaying on the display device ~~generating~~ a set of red-blue shifted gray elements with green values substantially equivalent to the selected green value, wherein at least one of the red and blue values of each of the red-blue shifted gray elements is different from the selected green value, and thereby ~~that~~ represent shifts in the red channel, blue channel, or a combination of the red and blue channels away from the first gray element; ~~and~~

estimating a gray balance of the display device based on user selection of one of the gray elements that appears to most closely blend with a gray background.

Claim 2 (Original): The method of claim 1, further comprising characterizing the colorimetric response of the display device based on the estimated gamma and estimated gray balance.

Claim 3 (Original): The method of claim 1, further comprising:

selecting one of a plurality of green elements displayed by a display device that appears to most closely blend with a dithered green background; and

estimating the gamma for the green channel of the display device based on the selected green element.

Claim 4 (Original): The method of claim 1, the method further comprising:

modifying a color image based at least in part on the estimated gray balance; and

delivering the modified color image to the display device.

Claim 5 (Original): The method of claim 1, wherein the display device is associated with a client residing on a computer network, the method further comprising:

transmitting information representing the estimated gray balance to a remote server on the network;

modifying the color image at the remote server based on the information; and

delivering the modified color image to the client via the computer network for display on the display device.

Claim 6 (Original): The method of claim 1, further comprising determining the estimated gamma by:

selecting one of a first plurality of green elements displayed by the display device that appears to most closely blend with the dithered green background;

estimating a coarse gamma for the display device based on the selected one of the first plurality of green elements;

selecting one of a second plurality of green elements displayed by the display device that appears to most closely blend with the dithered green background, wherein the second plurality of green elements includes the selected one of the first plurality of green elements; and

estimating a fine gamma for the display device based on the selected one of the second plurality of green elements, wherein the estimated fine gamma is the estimated gamma.

Claim 7 (Original): The method of claim 6, wherein the first plurality of green elements represent greater gradations in green intensity than the second plurality of green elements.

Claim 8 (Currently Amended): The method of claim 1, further comprising displaying the first gray element in a substantially central position relative to the red-blue shifted elements, ~~wherein the first gray element includes substantially equal red, green, and blue values based on the estimated gamma for the green channel.~~

Claim 9 (Canceled).

Claim 10 (Canceled).

Claim 11 (Original): The method of claim 1, further comprising:

- estimating the blackpoint of the display device; and
- characterizing the colorimetric response of the display device based on the estimated gamma, blackpoint, and gray balance.

Claim 12 (Original): The method of claim 11, wherein the display device is associated with a client residing on a computer network, the method further comprising:

- transmitting information representing the estimated blackpoint, gamma, and gray balance to a remote server on the network;
- modifying the color image at the remote server based on the information; and
- delivering the modified color image to the client via the computer network for display on the display device.

Claim 13 (Original): The method of claim 11, further comprising:

- modifying a color image based on the estimated blackpoint, gamma, and gray balance;
- and
- delivering the modified color image to the display device.

Claim 14 (Original): The method of claim 1, wherein the gray background is a dithered approximately 33% gray background.

Claim 15 (Original): The method of claim 1, wherein the display device is associated with a client on a computer network, the method further comprising guiding the client through the process of obtaining the estimated gray balance by delivering one or more instructional web pages to the client.

Claim 16 (Currently Amended): A system comprising:

a web server residing on a computer network, the web server transmitting web pages to remote clients residing on the computer network;

a color image server residing on the computer network, the color image server transmitting color images referenced by the web pages to the clients for display on display devices associated with the clients; and

a color profile server residing on the computer network, the color profile server guiding the clients through a color profiling process to obtain information characterizing the color responses of the display devices associated with the clients, wherein the information includes a gray balance for each of the display devices, and the color profiling process includes:

displaying on a display device a first gray element having red, green and blue values that are substantially equivalent to a selected green value based on an estimated gamma for a green channel of the a display device;

displaying on the display device a set of red-blue shifted gray elements with green values substantially equivalent to the selected green value, wherein at least one of the red and blue values of each of the red-blue shifted gray elements is different from the selected green value, and thereby ~~that~~ represent shifts in the red channel, blue channel, or a combination of the red and blue channels away from the first gray element; and

selecting one of the gray values that appears to most closely blend with a gray background, and

estimating the gray balance of the display device based on the selected gray element; and

one or more color correction modules that modify the color images transmitted by the color image server based on the information to improve the accuracy of the color images when displayed on the respective display device.

Claim 17 (Original): The system of claim 16, wherein the color image server stores the information to the client in a web cookie, the client transmits the web cookie from the client to the server, and the color image server modifies the color image via the server based on the contents of the web cookie.

Claim 18 (Original): The system of claim 16, wherein the color profiling process includes:  
selecting one of a plurality of green elements displayed by a display device that appears to most closely blend with a dithered green background; and  
estimating the gamma for the green channel of the display device based on the selected green element.

Claim 19 (Original): The system of claim 16, wherein the color profiling process includes determining the estimated gamma by:

selecting one of a first plurality of green elements displayed by the display device that appears to most closely blend with the dithered green background;

estimating a coarse gamma for the display device based on the selected one of the first plurality of green elements;

selecting one of a second plurality of green elements displayed by the display device that appears to most closely blend with the dithered green background, wherein the second plurality of green elements includes the selected one of the first plurality of green elements; and

estimating a fine gamma for the display device based on the selected one of the second plurality of green elements, wherein the estimated fine gamma is the estimated gamma.

Claim 20 (Original): The system of claim 19, wherein the first plurality of green elements represents greater gradations in green intensity than the second plurality of green elements.

Claim 21 (Currently Amended): The system of claim 16, wherein the color profiling process includes displaying the first gray element in a substantially central position relative to the red-blue shifted elements, ~~wherein the first gray element includes substantially equal red, green, and blue values based on the estimated gamma for the green channel.~~

Claim 22 (Canceled):

Claim 23 (Canceled):

Claim 24 (Original): The system of claim 16, wherein the color profiling process includes:  
estimating the blackpoint of the display device; and  
including with the information the estimated gamma and estimated blackpoint.

Claim 25 (Original): The system of claim 16, wherein the gray background is a dithered approximately 33% gray background.

Claim 26 (Currently Amended): The system method of claim 16, wherein the display device is associated with a client on a computer network, the method further comprising guiding the client through the process of obtaining the estimated gray balance by delivering one or more instructional web pages to the client.

Claim 27 (Currently Amended): A computer readable medium comprising containing instructions that cause a programmable processor to:

display on a display device generate a first gray element having red, green and blue values that are substantially equivalent to a selected green value based on an estimated gamma for a green channel of the a display device;

display on the displace device generate a set of red-blue shifted gray elements with green green values substantially equivalent to the selected green value, wherein at least one of the red and blue values of each of the red-blue shifted gray elements is different from the selected green value, and thereby that represent shifts in the red channel, blue channel, or a combination of the red and blue channels away from the first gray element; and

generate a gray balance of the display device based on user selection of one of the gray elements that appears to most closely blend with a gray background.

Claim 28 (Original): The computer readable medium of claim 27, wherein the instructions cause the processor to characterize the colorimetric response of the display device based on the estimated gamma and estimated gray balance.

Claim 29 (Original): The computer readable medium of claim 27, wherein the instructions cause the processor to:

select one of a plurality of green elements displayed by a display device that appears to most closely blend with a dithered green background; and

estimate the gamma for the green channel of the display device based on the selected green element.

Claim 30 (Original): The computer readable medium of claim 27, wherein the instructions cause the processor to:

modify a color image based at least in part on the estimated gray balance; and

deliver the modified color image to the display device.

Claim 31 (Original): The computer readable medium of claim 27, wherein the display device is associated with a client residing on a computer network, and the instructions cause the processor to:

transmit information representing the estimated gray balance to a remote server on the network;

modify the color image at the remote server based on the information; and

deliver the modified color image to the client via the computer network for display on the display device.

Claim 32 (Original): The computer readable medium of claim 27, wherein the instructions cause the processor to determine the estimated gamma by:

selecting one of a first plurality of green elements displayed by the display device that appears to most closely blend with the dithered green background;

estimating a coarse gamma for the display device based on the selected one of the first plurality of green elements;

selecting one of a second plurality of green elements displayed by the display device that appears to most closely blend with the dithered green background, wherein the second plurality of green elements includes the selected one of the first plurality of green elements; and

estimating a fine gamma for the display device based on the selected one of the second plurality of green elements, wherein the estimated fine gamma is the estimated gamma.

Claim 33 (Original): The computer readable medium of claim 32, wherein the first plurality of green elements represent greater gradations in green intensity than the second plurality of green elements.

Claim 34 (Currently Amended): The computer readable medium of claim 27, wherein the instructions cause the processor to display the first gray element in a substantially central position relative to the red-blue shifted elements, ~~wherein the first gray element includes substantially equal red, green, and blue values based on the estimated gamma for the green channel.~~

Claim 35 (Canceled).

Claim 36 (Canceled).

Claim 37 (Original): The computer readable medium of claim 27, wherein the instructions cause the processor to:

- estimate the blackpoint of the display device; and
- characterize the colorimetric response of the display device based on the estimated gamma, blackpoint, and gray balance.

Claim 38 (Original): The computer readable medium of claim 37, wherein the display device is associated with a client residing on a computer network, and the instructions cause the processor to:

- transmit information representing the estimated blackpoint, gamma, and gray balance to a remote server on the network;
- modify the color image at the remote server based on the information; and



deliver the modified color image to the client via the computer network for display on the display device.

Claim 39 (Original): The computer readable medium of claim 37, wherein the instructions cause the processor to:

modify a color image based on the estimated blackpoint, gamma, and gray balance; and  
deliver the modified color image to the display device.

Claim 40 (Original): The computer readable medium of claim 27, wherein the gray background is a dithered approximately 33% gray background.

Claim 41 (Original): The computer readable medium of claim 27, wherein the display device is associated with a client on a computer network, and the instructions cause the processor to guide the client through the process of obtaining the estimated gray balance by delivering one or more instructional web pages to the client.

Claim 42 (Original): The computer readable medium of claim 27, wherein the instructions are contained both in physical data storage media and signals transmitted between the client and other resources on the computer network.